

TERRA VAC

SOIL INVESTIGATION REPORT
conducted at the
TECHNI-BRAZE, INC. FACILITY
11845 Burke Street
Santa Fe Springs, California

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February 3, 1995

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Vice President

A handwritten signature in black ink, appearing to read 'Stephen Mutch'.

Stephen Mutch
Project Manager

A handwritten signature in black ink, appearing to read 'Jeffery Fujita'.

Jeffery Fujita
Staff Geologist



**SOIL INVESTIGATION REPORT
CONDUCTED FOR HINDERLITER HEAT TREATING
AT THE TECHNI-BRAZE, INC. FACILITY
11845 BURKE STREET, SANTA FE SPRINGS, CALIFORNIA**

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EXECUTIVE SUMMARY

The site at 11845 Burke Street, Santa Fe Springs is currently occupied by Techni-Braze, Inc. (TBI). TBI conducts alloy brazing and heat treatment of metal parts using seven vacuum and five induction furnaces. TBI has been the sole occupant of the property since the building was constructed in 1966. Prior to 1966, the area was used for agricultural purposes, presumably as a walnut grove, according to TBI personnel.

An initial soil investigation was performed in 1991, consisting of a soil vapor survey and four soil borings to depths of 20 feet BGS. Analysis of collected soil samples indicated concentrations of tetrachloroethene (PCE). Laboratory analysis on groundwater samples collected at that time also indicated levels of PCE. Data collected pointed to two potential PCE sources: the former degreaser and above-ground PCE tank, both located outside the building on the northwest corner.

A site investigation was conducted by Terra Vac in January 1995. This investigation was conducted inside the Techni-Braze facility and outside along the perimeter of the property. Soil and groundwater samples collected during the current site investigation show evidence of soil and groundwater contaminated with 1,2-DCA, TCE and PCE. Soil contamination was identified in all of the soil borings at various concentrations, from the ground surface to the groundwater table. The groundwater samples from both previously existing and newly installed monitoring wells consistently show PCE contamination.

The detection of VOCs near the furnace area and former above grade storage tank (northwest corner of the building) were consistent with previous findings. Contamination has migrated through the soils from the degreasing area and above grade PCE storage tank under the Techni-Braze building toward Burke Street and north towards the alley. The soil samples collected from CPT-1 through CPT-3 (upgradient from the suspected source) were not-detectable for PCE to 15 feet BGS. Lower levels of detectable PCE found in the capillary fringe to the North, West and South would indicate migration of soil contamination off-site.

All of the groundwater samples had detectable concentrations of PCE. Higher PCE concentrations in groundwater samples upgradient of the potential sources (MW-5 at 14,000 µg/l) would be consistent with contaminant migration through more permeable soils, where the PCE contamination ultimately intersected the water table. Concentrations of PCE (MW-11 at 11,000 µg/l) inside of the TBI facility also indicate the same migration pathway. The movement of the groundwater has subsequently caused the PCE contamination to migrate under the TBI building towards and across Burke Street. All of the groundwater samples showed PCE concentrations to exceed the maximum concentration limit (MCL) of 5 µg/l for PCE.

Remediation of this site should be considered using *in situ* air sparging and soil vapor extraction technologies. Lithologic soil information confirms that the existing soils in this area are very good for these remedial methods.

Air sparging wells would be installed around the Techni-Braze Property for injecting air through soil below the water table. This approach effectively creates a

natural air stripper in the subsurface soil column and VOCs in the groundwater are removed. Vapor extraction wells will be installed to remove VOCs from the soils and assist the air sparging system remove stripped VOCs from the groundwater.

During the air sparging activities, hydrogen peroxide will be injected into the groundwater. Concentrated hydrogen peroxide has been used to treat soil and groundwater for many years. Terra Vac feels that this technology will be required for remediation of the known and suspected VOCs at this site.

1.0 INTRODUCTION

This soil investigation report is submitted as documentation for environmental site assessment activities conducted at the Techni-Braze, Inc. (TBI) facility, located at 11845 Burke Street, Santa Fe Springs, California (Figure 1). The work conducted at the site was in accordance with a Terra Vac work plan following all appropriate County or State agency requirements (County of Los Angeles Department of Public Works Waste Management Division or California Regional Water Quality Control Board). The work plan has been included in Appendix A. A site-specific Health and Safety Plan tailored to the specific site conditions was followed during the field activities.

Terra Vac was retained by Hinderliter Heat Treating to conduct a soil investigation at the TBI facility. The work consisted of drilling and sampling six soil borings to approximately 42 feet below ground surface (BGS). After completion of the soil sampling, the six soil borings were converted to groundwater monitoring wells. The wells were developed and sampled. In addition to the new wells, seven existing groundwater monitoring wells were purged and sampled. The samples were submitted to a California-certified laboratory for analyses.

Soil and groundwater samples were collected off-site of the Techni-Braze Property, using a cone penetrometer test (CPT) rig. Soil and groundwater samples were collected at six CPT sampling locations on the North, West and South sides of the TBI facility.

2.0 PREVIOUS INVESTIGATIONS

TBI engaged an environmental consultant to perform certain environmental site assessment tests at the TBI facility in Santa Fe Springs. The preliminary site investigations indicated that soil and groundwater were contaminated with halogenated volatile organic compounds (VOCs).

In September 1991, Kleinfelder was retained to conduct groundwater sampling, a soil vapor survey and subsurface soil sampling for TBI, located at 11845 Burke Street, Santa Fe Springs, California. The field activities were initiated during September 1991 and completed in early October 1991.

A soil vapor survey was conducted to provide data for use in assessment of potential locations where VOCs may have been released into the soil. A survey grid was established and a total of 29 soil vapor samples were collected and analyzed on-site. The samples were analyzed for VOCs using United States Environmental

Protection Agency (EPA) Methods 8010 and 8020, combined. Analytical results indicated tetrachloroethylene (PCE) was detected at all sample locations. Detected concentrations of PCE ranged from 0.02 ppm (V15) to 1,080 ppm (V28). Analytical laboratory results indicated PCE was detected at much higher concentrations surrounding the former parts degreaser area and the existing aboveground PCE storage tank area than the rest of the site.

Four soil borings were drilled to depths of 20 feet below grade in the proximity of the former parts degreaser area and the existing aboveground PCE storage tank area (northwest corner of the existing building). Twenty-eight soil samples (seven samples from each boring) were collected and analyzed for VOCs using EPA Methods 8010 and 8020, combined.

Analytical laboratory results indicated PCE was detected in all but two soil samples. PCE was present in soil boring B3 (close to the former parts degreaser), ranging from 3.770 milligrams per kilogram (mg/kg) at 1 foot below grade to 6.910 mg/kg at 20 feet below grade. PCE was also present in soil boring B4 (under the former parts degreaser), ranging from 26.570 mg/kg at 1 foot below grade to 3.760 mg/kg at 20 feet below grade. PCE was detected in soil boring B5 (close to the aboveground PCE tank), ranging from 60.620 mg/kg at 1 foot below grade to 0.850 mg/kg at 20 feet below grade. PCE was also detected in soil boring B6, ranging from 1.400 mg/kg at 1 foot below grade to 3.050 mg/kg at 20 feet below grade.

Groundwater samples were collected and analyzed for halogenated volatile organic compounds using EPA Method 601. Analytical laboratory results indicated PCE was detected in all groundwater samples at concentrations ranging from 62 µg/l to 5,800 µg/l.

Data collected during this assessment indicated that there were potentially two PCE release points: 1) from the former degreaser; and, 2) from the aboveground PCE tank. One possible source of PCE contamination, the degreaser, had been removed from the property prior to this investigation.

3.0 EXISTING CONDITIONS

The TBI property, located at 11845 Burke Street, Santa Fe Springs, consists of approximately 55,210 square feet of land (property). The property is improved with a 24,321-square foot, two-story building used for office, storage, manufacturing and distribution (Figure 1).

TBI conducts alloy brazing and heat treatment of metal parts using seven vacuum and five induction furnaces. Except for the building, the majority of the property is paved with asphalt. The south side of the property along Burke Street has approximately 1,000 square feet of landscaping. TBI has been the sole occupant of the property since the building was constructed in 1966. Prior to 1966, the area was used for agricultural purposes, presumably as a walnut grove, according to TBI personnel.

4.0 LOCAL GEOLOGY AND HYDROLOGY

Local Geology

The site is located along the northeastern margin of the Central Block of the Los Angeles Basin. The Whittier Fault Zone, within the Puente Hills, is approximately 3 miles northeast of the site, and acts as the northern boundary of the Central Block (United States Geological Survey, 1965).

Drainage from the San Gabriel Valley and surrounding highlands passes through the Whittier Narrows. The Whittier Narrows is an erosional feature located between the Merced and Puente Hills, approximately 4 miles north of the site. The two major streams passing through the Whittier Narrows are the Rio Hondo and the San Gabriel River (State of California, Department of Water Resources, 1961).

Sediments immediately beneath the site are Holocene alluvium consisting of unconsolidated and poorly consolidated gravel, sand and silt (United States Geological Survey, 1972; and California Division of Mines and Geology, 1962).

The recent alluvial deposits overlie the Pleistocene age Lakewood Formation. The Lakewood Formation in the general vicinity of the Techni-Braze site is approximately 250 feet thick and consists of marine and continental gravel, sand, sandy silt, silt, and clay (CDWR, 1988). A distinctive clay unit makes up the upper portion of the Lakewood Formation and ranges from 40 to 110 feet in thickness. This clay unit is known as the Bellflower Aquiclude, a low-transmissivity confining layer that separates the underlying artesian aquifers from the overlying semi-perched aquifer. The aquiclude, in the vicinity of the site, is reportedly approximately 70 feet BGS (CRWQCB, 1995). It overlies the Exposition and Gage aquifers, water-producing zones consisting of coarser-grained sediments.

The California Division of Oil and Gas (1974) reports the Santa Fe Springs Oil Field is located approximately one mile south of the site, in addition to several oil fields located to the northeast of the site along the Whittier Fault Zone within the Puente Hills.

Hydrogeology

The site is located within the Central Basin (within the Montebello Forebay), which underlies the southeastern part of the Los Angeles Coastal Plain. The Central Basin is made up of three areas: the Los Angeles Forebay, the Montebello Forebay, and the Central Basin Pressure Area.

The potential for the percolation of water from the surface down through underlying aquifers is due to several aquifers within the Montebello Forebay having hydraulic continuity in varying degrees, with each other and the ground surface. Percolation of rainfall, natural stream flow or imported water spread on the land surface can easily reach the groundwater in this unconfined area (State of California, Department of Water Resources, 1988; and Metropolitan Water District of Southern California, 1987). Spreading basins (for groundwater recharge) are located along the San Gabriel River, Rio Hondo River and at the Whittier Narrows flood control basin. These basins are located approximately 1.5 northwest, 3 miles

northwest and 4 miles north of the site, respectively (State of California, Department of Water Resources, 1988; and State of California, Department of Water Resources, 1961).

A buried lense of water-bearing gravel of the Gaspar Zone reportedly trends southwestward along the course of the San Gabriel River beneath the site (United States Geological Survey, 1972; and State of California, Department of Water Resources, 1961). Groundwater in this area was previously reported at 31 to 34 feet BGS (Woodward-Clyde, 1991). The recent rains may account for the rise in the current groundwater elevation during well installation activities in January 1995. Hydraulic conductivities ranging from 1 to 55 feet per day and groundwater velocities ranging from 6 to 300 feet per year were reported for the semi-perched aquifer (State of California, Department of Water Resources, 1986).

5.0 SOIL BORING INVESTIGATION

Site investigation activities at TBI were conducted using a hollow stem drill rig with ten-inch augurs. A total of six soil boring/monitoring wells (MW-8, MW-9, MW-10, MW-11, MW-12, and MW-14) were drilled to depths ranging from 42 to 45 feet BGS. A seventh monitoring well (MW-13) was planned to be located west of the furnace area, outside the building, but was eliminated from the scope of work due to the proximity of a high tension transformer and a cooling tower. The presence of this large electrical source and lack of adequate space in which to maneuver equipment were deemed by Terra Vac too hazardous for drilling personnel. A site map showing all current soil boring/monitoring well locations is included (Figure 2).

Soil samples were collected at five-foot intervals to approximately 30 feet BGS. All soil samples were collected using an 18-inch California split spoon sampler. Three brass sleeves (2-inches by 6-inches each) were used to contain the soil samples. When the split spoon was opened, the ends of the bottom-most sleeve were covered with Teflon sheets or aluminum foil and plastic end caps, labeled and placed into an ice chest with blue ice.

The top and middle sleeves were used to screen for possible contamination and to detail the stratigraphy of the subsurface lithologic inspection. The soil samples were monitored for organic vapors and methane using the Thermo-Environmental 590-B organic vapor monitor (OVM). Soil samples were placed into zip-lock-type baggies, sealed and allowed to sit for approximately 10 minutes. The OVM tip was then inserted into the zip-lock bag to analyze the airspace above the soil. Soil samples were screened in the field for the presence of chlorinated solvents and methane using the OVM. Field screening of the soil samples also included hydrogen sulfide. A specific hydrogen sulfide monitor was calibrated and operated following the manufacture's recommendations. Selected soil samples were then packaged and shipped to the analytical laboratory for analyses. The samples were submitted following all appropriate chain-of-custody procedures and Terra Vac standard operating procedures (SOPs). This SOP is included in Appendix B. The OVM and hydrogen sulfide readings and soil lithology information are presented on the boring logs, included in Appendix C.

The soil cuttings were contained in DOT-approved, 17-H 55 gallon drums and located on-site for proper disposal by TBI. The drums were labeled with site information, description of contents, date of collection and points of contact, including emergency phone numbers.

All sampling and drilling equipment was decontaminated before being used. The drilling augers were cleaned with a high pressure steam cleaner and the sampling equipment, i.e., split spoons, sample sleeves and other sampling equipment, was triple-washed in potable water and Alconox soap. The equipment was then rinsed with de-ionized water and allowed to air dry. All decontamination water was contained in DOT-approved, 17-H 55 gallon drums, labeled and stored on-site as described above.

6.0 CONE PENETROMETER SAMPLING

Cone penetrometer testing was conducted at six locations around the Techni-Braze property. CPT sample locations were placed as shown on Figure 2. These sample locations were positioned to determine potential up-gradient migration of contamination. CPT sample points CPT-1, CPT-2, CPT-3, were placed in the alley north of the site. The CPT-4 sample point was located west of the Techni-Braze property, just on the other side of the Los Angeles County Flood Control channel. This CPT location is approximately in the same area where MW-13 was to be placed. CPT-5 and CPT-6 were placed south of the building, nearest to the southern curb of Burke Street (across the street).

Soil samples were collected at 15 to 16 feet BGS and at the capillary fringe in each sample location. Samples were handled and submitted to the analytical laboratory as described in Section 5.0.

Groundwater samples were collected at depths ranging from 31 to 35 feet BGS. Samples were collected by bailing groundwater through the CPT push rods and decanted into the sample containers.

7.0 GROUNDWATER MONITORING WELL COMPLETION

Upon completion of the soil sampling activities, the six soil borings were converted to groundwater monitoring wells (MW-8, MW-9, MW-10, MW-11, MW-12, and MW-14). These monitoring wells were drilled approximately 20 feet below the water table. The monitoring wells were constructed with 4-inch PVC casing. Each well has 30 feet of 0.020-inch screen and 12 feet of blank casing (MW-14 has 15 feet of blank casing). The filter pack consists of Monterey Sand No. 2/12. Soil boring logs and well completion diagrams are included in Appendix C.

All of the groundwater monitoring wells (13) were developed by surging and pumping until the well parameters (pH, temperature and conductivity) stabilized. Development water quality reports are included with the borings/well completion logs (Appendix C). Groundwater wells were developed until water quality measurements had stabilized and a minimum of three borehole volumes of water had been removed. The wells were then allowed to recover to at least 80 percent of their static condition before groundwater sample were collected.

Groundwater samples were collected in proper containers using an unused disposable bailer. Once the sample had been collected, it was labeled and placed into a cooler. All groundwater samples collected were submitted to a laboratory for analyses.

Note: Previously existing monitoring wells, MCA-1 (located centrally north of the building) could not be properly purged due to a pronounced curvature in the 2-inch diameter well casing. The bailer could not be lowered past the bend and into the water column. A water sample was obtained with the understanding that the well was not properly purged prior to sampling.

The depth to groundwater from top of casing was measured in the currently installed and previously existing monitoring wells. The data is tabulated and presented with the boring logs in Appendix C.

8.0 LABORATORY ANALYSIS

During the site investigation, 49 soil samples were collected from the soil boring/monitoring well and CPT locations, and screened as described above (Section 5.0). Thirty soil samples were selected based on OVM screening and submitted to a California-certified laboratory for analyses. The soil samples were analyzed for EPA Method 8240/624 for volatile organics and EPA Method 8015 (modified for kerosene). The laboratory analytical reports are included in Appendix D.

EPA Method 8240 Results

A total of 30 soil samples were analyzed using EPA Method 8240 for VOCs. This method includes Acetone, Tetrachloroethylene (PCE) and trichloroethylene (TCE). Soil samples were selected based on the OVM readings and location of the soil boring/CPT with respect to suspected contaminated areas under the building and to give an even distribution of sample analyses across the site. The six CPT locations were selected to characterize potential plume migration to the north, west and south of the Techni-Braze property.

The analytical results for EPA Method 8240 are shown in Table 1. Only those analytes with detectable concentrations above the detection limit are included on this table. All other analytes were not detected. As Table 1 shows, of the 30 soil samples analyzed, 18 samples were detected for PCE and one sample was detected for TCE.

A total of 19 groundwater samples were collected from the six newly installed groundwater monitoring wells, the seven existing monitoring wells and the six CPT locations. These samples were also analyzed using EPA Method 8240 (EPA Method 624) for VOCs. PCE was detected in all the groundwater samples, including highs in MW-5 (14,000 µg/l) and MW-11 (11,000 µg/l). PCE concentration levels were above the California Maximum Contaminant Level (MCL) of 5 µg/l, with the exception of the sample collected from MCA-2. A groundwater contour map showing PCE contamination at the Techni-Braze Inc. property, has been included as Figure 3.

The following analytes were also detected: 1, 1-dichloroethene (MW-6, MW-7, MW-10, MW-11, and MW-12); chloroform (MW-6, MW-10, and MW-11); 1, 1, 1-trichloroethane (MW-6, MW-7, MW-9, MW-10, MW-11, and MW-12) and trichloroethene (MW-6, MW-9, MW-10, MW-11, and MW-12). Two samples detected for 1, 1-dichloroethene exceeded the MCL of 6 µg/l; 9 samples detected for trichloroethylene exceeded the MCL of 5 µg/l. All of the chloroform and 1, 1, 1-trichloroethane concentrations were below the MCLs of 100 µg/l and 200 µg/l respectively. The remaining analytes were either not detected or below the respective MCLs. All detected EPA Method 8240 analytes are shown in Table 2.

EPA Method 8015 Results

Soil samples were analyzed using EPA Method 8015 modified for kerosene. A total of 17 soil samples were selected from the CPT and drilling activities, using OVM readings. Additional samples were selected to give an even distribution of analyses across the site. All of the kerosene results from the soil samples using were non detected at a method detection limit of 10 mg/kg.

A total of 13 groundwater samples, collected from the monitoring wells MCA-1 through 4, MW-5, MW-7 through 10, MW-12, and MW-14 and from CPT 5 and CPT-6, were analyzed using EPA Method 8015 modified for kerosene. All of the kerosene results from the groundwater samples using were non detected at the method detection limit of 2.0 mg/l.

9.0 CONCLUSIONS

Soil and groundwater samples collected during the site investigation at the TBI facility show evidence of vadose zone soil and groundwater contaminated with VOCs (mainly PCE). Soil contamination was identified in all of the soil borings at various levels of concentrations, from the ground surface to the groundwater table. The groundwater samples from both previously existing and newly installed monitoring wells also show PCE contamination to exceed the MCL of 5 µg/l for PCE (California Code of Regulations, Title 22).

The detection of VOCs near the furnace area and former above grade storage tank (northwest corner of the building) were consistent with previous findings. Contamination has migrated through the soils from the degreasing area and above grade PCE storage tank under the Techni-Brace building toward Burke Street and north towards the alley. The soil samples collected from CPT-1 through CPT-3 (upgradient from the suspected source) were not-detectable for PCE to 15 feet BGS. Lower levels of detectable PCE found in the capillary fringe to the North, West and South would indicate migration of soil contamination off-site.

All of the groundwater samples had detectable concentrations of PCE. Higher PCE concentrations in groundwater samples upgradient of the potential sources (MW-5 at 14,000 µg/l) would be consistent with contaminant migration through more permeable soils, where the PCE contamination ultimately intersected the water table. Concentrations of PCE (MW-11 at 11,000 µg/l) inside of the TBI facility also indicate the same migration pathway. The movement of the groundwater has subsequently caused the PCE contamination to migrate under the TBI building towards and across Burke Street.

Acetone and kerosene in both soils and groundwater were not detected at 10 mg/kg and 5 µg/l, respectively. Methane and hydrogen sulfide also were not detected during field instrument monitoring.

10.0 RECOMMENDATIONS

Remediation of this site should be considered as the next phase, using *in situ* air sparging and soil vapor extraction technologies. As the soil and groundwater analytical results show, the majority of contamination exists in soils from near-surface to the water table (approximately 27 feet BGS) and has migrated to the groundwater. Lithologic soil information confirms that the existing soils in this area are very good for these remedial methods.

Air sparging wells would be installed around the Techni-Braze Property for injecting air through soil below the water table. This approach effectively creates a natural air stripper in the subsurface soil column and VOCs in the groundwater are removed. Vapor extraction wells will be installed to remove VOCs from the soils and assist the air sparging system remove stripped VOCs from the groundwater.

During the air sparging and vapor extraction activities, hydrogen peroxide will be injected into the groundwater. Concentrated hydrogen peroxide has been used to treat soil and groundwater for many years. When properly injected into the subsurface, concentrated hydrogen peroxide (>3%) reacts with naturally occurring iron (Fe^{2+}) to produce the hydroxyl radical (OH), commonly known as Fenton's reagent. The hydroxyl radical is a very strong oxidizer and will break down VOCs, usually within a few minutes of injection. Terra Vac feels that this technology will be required for remediation of the known and suspected VOCs at this site.





TABLE 1

TECHNI-BRAZE FACILITY
SOIL RESULTS

Sample Location	Depth (feet)	EPA 8240 ($\mu\text{g/kg}$)		
		Acetone	Trichloroethene	Tetrachloroethene
MW-8	6.5	ND	ND	ND
MW-8	21.5	ND	ND	9.5
MW-8	31	ND	ND	6.7
MW-9	6.5	ND	ND	220
MW-9	21.5	ND	ND	28
MW-9	26.5	ND	ND	5.6
MW-10	6.5	ND	ND	120
MW-10	21.5	ND	ND	150
MW-10	36.5	ND	4.9	32
MW-11	6.5	ND	ND	11
MW-11	21.5	ND	ND	15
MW-11	31.5	ND	ND	40
MW-12	6.5	ND	ND	ND
MW-12	16.5	ND	ND	4.1
MW-12	26.5	ND	ND	7.4
MW-14	11.5	ND	ND	ND
MW-14	21.5	ND	ND	330
MW-14	31	ND	ND	1100
CPT-1	15	ND	ND	ND
CPT-1	28	ND	ND	140
CPT-2	15	ND	ND	ND
CPT-2	28	ND	ND	ND
CPT-3	15	ND	ND	ND
CPT-3	28	ND	ND	8.1
CPT-4	15	ND	ND	ND
CPT-4	26	ND	ND	ND
CPT-5	16	ND	ND	ND
CPT-5	26	ND	ND	ND
CPT-6	16	ND	ND	6.6
CPT-6	26	ND	ND	ND

*ND = Not Detected

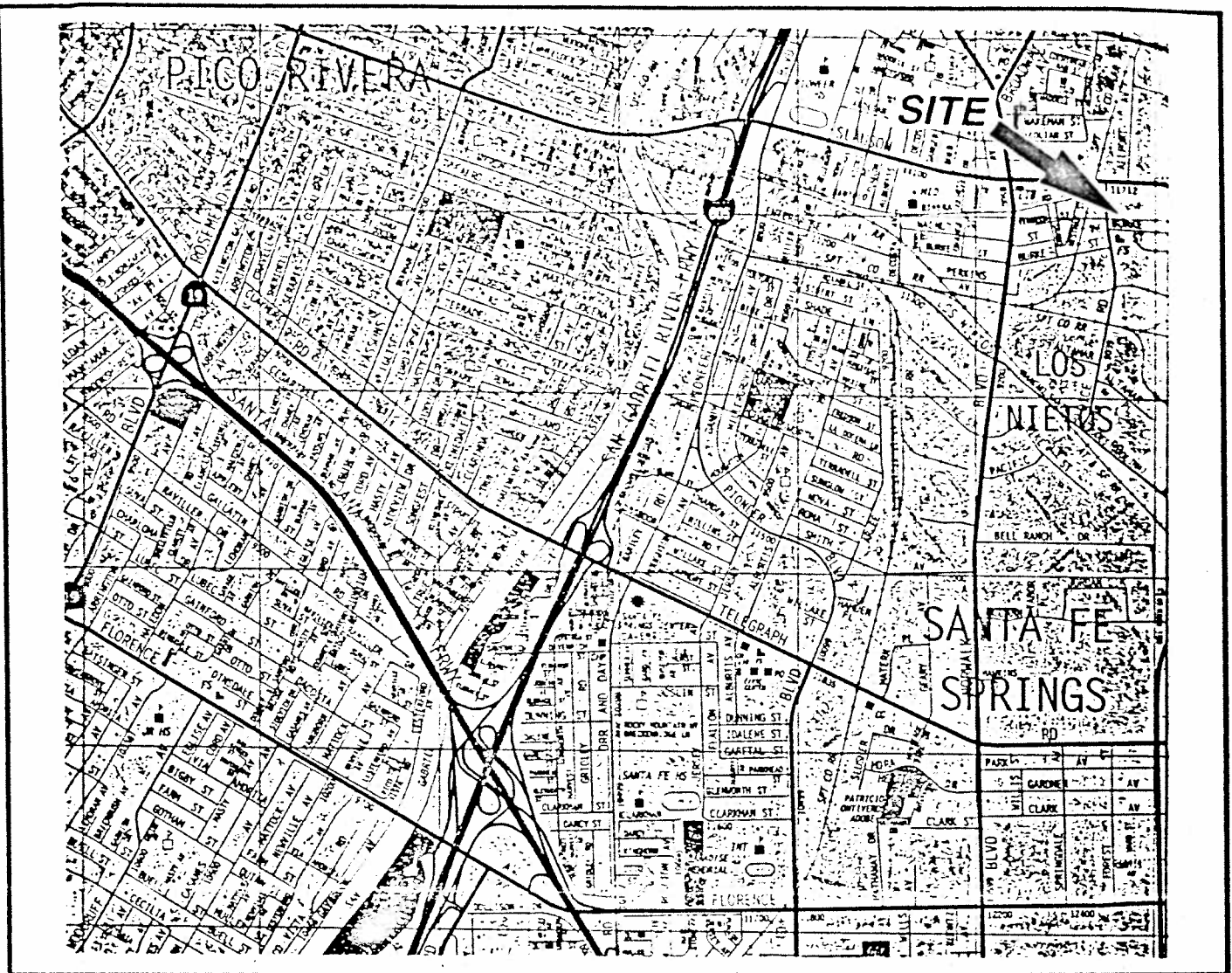
TABLE 2

TECHNI-BRAZE FACILITY
WATER RESULTS

Sample Location	EPA 8240 (µg/l)						
	Acetone	Chloroform	1,1-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene	Tetrachloroethene	
MW-5	ND	ND	ND	ND	ND	ND	14000
MW-6	ND	0.5	1.9	0.8	52	52	3900
MW-7	ND	ND	4.4	ND	9.3	9.3	1600
MW-8	ND	ND	ND	ND	5.3	5.3	150
MW-9	ND	ND	ND	8.5	2.1	2.1	3300
MW-10	ND	0.8	3.6	1.7	ND	ND	7700
MW-11	ND	0.8	4.4	4.8	32	32	11000
MW-12	ND	0.6	1.3	1	30	30	3900
MW-14	ND	ND	ND	7.6	ND	ND	380
MCA-1	ND	ND	ND	ND	0.8	0.8	49
MCA-2	ND	ND	ND	18	ND	ND	4.4
MCA-3	ND	ND	16	11	ND	ND	550
MCA-4	ND	ND	4.6	25	ND	ND	8700
CPT-1	ND	0.8	1.4	ND	15	15	800
CPT-2	ND	ND	ND	ND	3.9	3.9	11
CPT-3	ND	ND	ND	ND	ND	ND	43
CPT-4	ND	ND	ND	ND	6.5	6.5	13
CPT-5	ND	ND	91	30	12	12	580
CPT-6	ND	ND	ND	ND	12	12	220

*ND = Not Detected



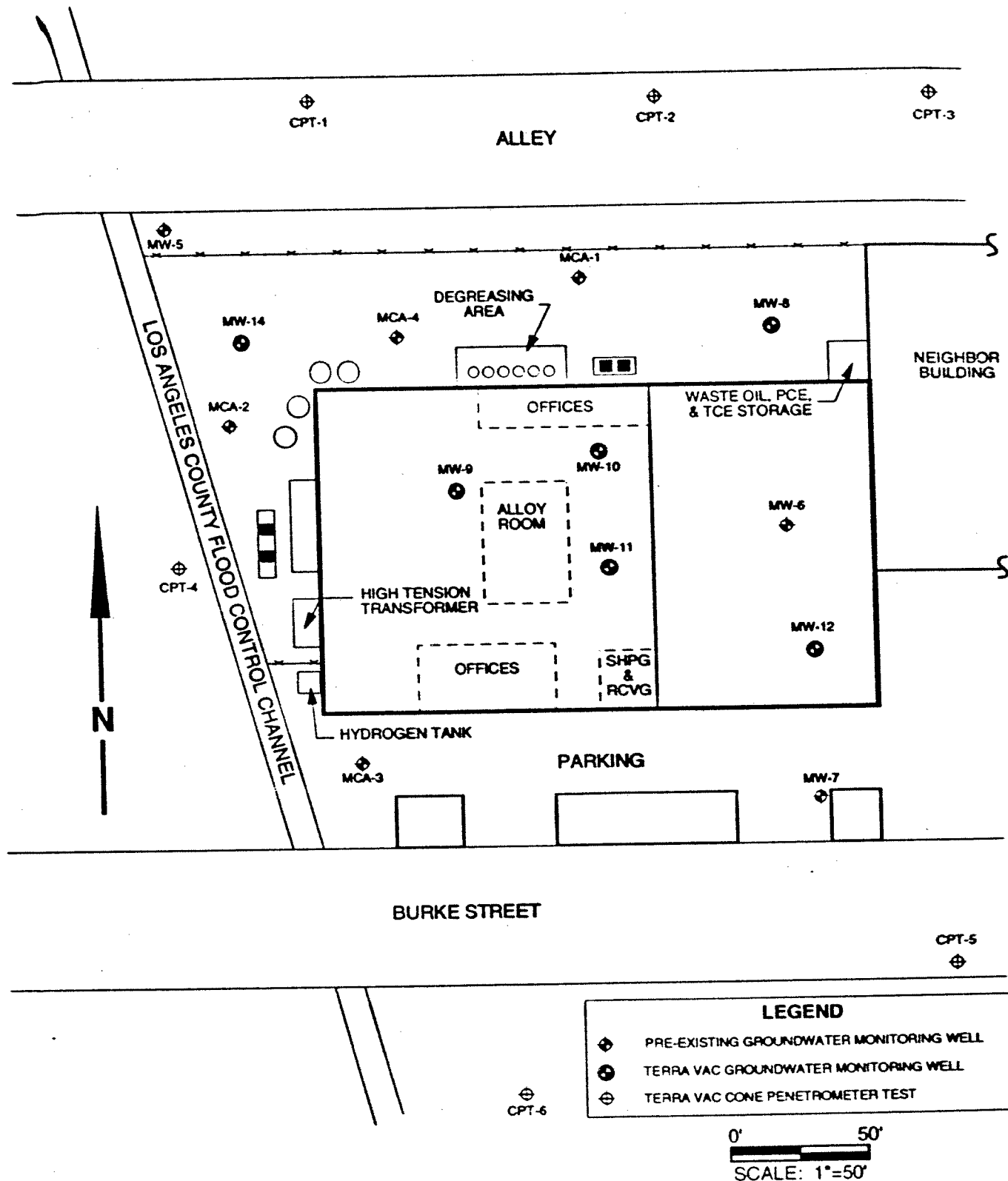


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Project No.	31-0247
Date	Jan 1995
Scale	
Revision	

Figure 1: Site Location Map
Techni-Brace Inc. Facility
11845 Burke Street
Santa Fe Springs, CA



TERRA VAC
Subsurface Remediation Specialists

- Site Assessment
- Air Sparging Systems
- Vapor Extraction
- Bioremediation
- Dual Phase Extraction
- Ground Water Remediation

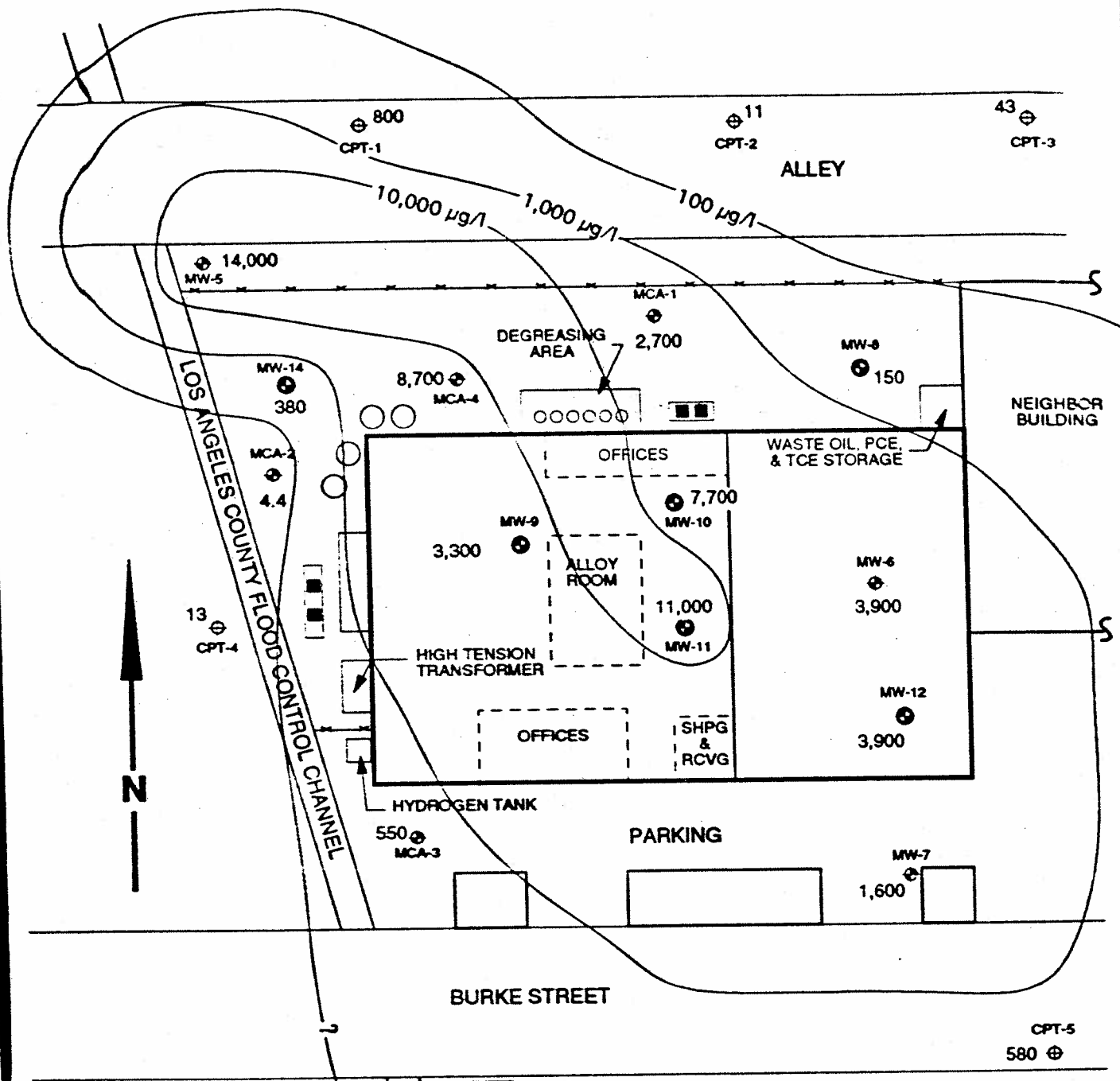
1401 Davis St., Ste. 300
Beverly Hills, CA 92680

TEL (714) 252-8900
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FIGURE 2
MONITORING WELL AND CONE
PENETROMETER TEST LOCATIONS
TECHNI-BRAZE, INC.

PROJECT NO: 31-0247
DESIGNED BY: DCM, JMF
CHECKED BY:
PROJECT MGR: SM
SHEET 1 OF 1



LEGEND

- ⊕ PRE-EXISTING GROUNDWATER MONITORING WELL WITH PCE CONCENTRATION IN µg/l
 - ⊙ TERRA VAC GROUNDWATER MONITORING WELL WITH PCE CONCENTRATION IN µg/l
 - ⊕ TERRA VAC CONE PENETROMETER TEST WITH PCE CONCENTRATION IN µg/l
 - ISOCONTOUR OF TETRACHLOROETHENE
- NOTE: MCA-1 PCE CONCENTRATION FROM PREVIOUS SAMPLING EVENT. PROPER DEVELOPMENT NOT POSSIBLE AT THIS TIME DUE TO BENT WELL CASING.

220
⊕
CPT-6

0' 50'
SCALE: 1"=50'

TERRA VAC

Subsurface Remediation Specialists

- Site Assessment
- Vapor Extraction
- Soil Vapor Extraction
- Air Sparging Systems
- Bioremediation
- Ground Water Remediation

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Subsurface Remediation Specialists

FIGURE 3
Groundwater PCE
ISO-CONTOUR MAP
TECHNI-BRAZE, INC.

PROJECT NO: 31-0247

DESIGNED BY: DCM, JMF

CHECKED BY:

PROJECT MGR: SM

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